

| Project Title   | Funding     | Strategic Plan Objective | Institution   |
|---|-------------|--------------------------|---|
| 16p11.2 rearrangements: Genetic paradigms for neurodevelopmental disorders                        | \$100,000   | Q2.S.D                   | University of Lausanne  |
| 20-year outcome of autism   | \$0         | Q2.L.A                   | University of Utah  |
| 3 Tesla 31Phosphorus magnetic resonance spectroscopy in disorder with abnormal bioenergetics      | \$0         | Q2.Other                 | Massachusetts General Hospital  |
| a-Actinin Regulates Postsynaptic AMPAR Targeting by Anchoring PSD-95                              | \$0         | Q2.Other                 | University of California, Davis Medical Center<br>University of California, Davis |
| a-Actinin Regulates Postsynaptic AMPAR Targeting by Anchoring PSD-95                              | \$0         | Q2.Other                 | University of California, Davis   |
| Aberrant synaptic form and function due to TSC-mTOR-related mutation in autism spectrum disorders | \$150,000   | Q2.S.D                   | Columbia University   |
| Abnormal connectivity in autism   | \$15,000    | Q2.Other                 | University of California, Los Angeles   |
| ACE Center: Genetic and genomic analyses to connect genes to brain to cognition in ASD            | \$241,951   | Q2.S.G                   | University of California, Los Angeles   |
| ACE Center: Neuroimaging signatures of autism: Linking brain function to genes and behavior       | \$178,857   | Q2.S.G                   | University of California, Los Angeles   |
| ACE Center: Ontogeny and neural basis of social visual engagement in monkeys                      | \$304,370   | Q2.Other                 | Emory University  |
| ACE Center: Predicting risk and resilience in ASD through social visual engagement                | \$226,068   | Q2.L.B                   | Emory University  |
| ACE Network: A longitudinal MRI study of infants at risk for autism                               | \$2,391,469 | Q2.L.A                   | University of North Carolina at Chapel Hill                                       |
| ACE Network: Multimodal developmental neurogenetics of females with ASD                           | \$2,670,192 | Q2.S.B                   | Yale University   |
| A cerebellar mutant for investigating mechanisms of autism in Tuberous Sclerosis                  | \$149,967   | Q2.S.D                   | Boston Children's Hospital  |
| A collaborative translational autism research program for the military.                           | \$966,000   | Q2.S.G                   | Nationwide Children's Hospital  |
| Action anticipation in infants  | \$105,936   | Q2.Other                 | University of Chicago   |
| Activity-dependent Mechanisms of Visual Circuit Formation   | \$0         | Q2.Other                 | Children's Research Institute (CRI)<br>Children's National Medical Center         |
| Addressing challenges to post-mortem tissue donation in families affected with autism             | \$64,000    | Q2.S.C                   | Autism Science Foundation   |
| A family-genetic study of autism and fragile X syndrome   | \$593,966   | Q2.S.D                   | Northwestern University   |
| A family-genetic study of language in autism  | \$308,419   | Q2.S.G                   | Northwestern University   |
| A functional genomic analysis of the cerebral cortex  | \$486,802   | Q2.Other                 | University of California, Los Angeles   |
| A gene-driven systems approach to identifying autism pathology                                    | \$249,874   | Q2.S.G                   | University of California, San Francisco   |
| Allelic choice in Rett syndrome   | \$374,862   | Q2.S.D                   | Winifred Masterson Burke Medical Research Institute                               |
| A longitudinal MRI study of brain development in fragile X syndrome                               | \$549,582   | Q2.S.D                   | University of North Carolina at Chapel Hill                                       |
| Alteration of Dendrite and Spine Number and Morphology in Human Prefrontal Cortex of Autism       | \$25,000    | Q2.S.D                   | University of California, Davis   |

| Project Title  | Funding   | Strategic Plan Objective | Institution  |
|--|-----------|--------------------------|--|
| Alterations in brain-wide neuroanatomy in autism mouse models  | \$300,000 | Q2.Other                 | Cold Spring Harbor Laboratory                            |
| Altered placental tryptophan metabolism: A crucial molecular pathway for the fetal programming of neurodevelopmental disorders   | \$0       | Q2.S.A                   | University of Southern California                        |
| Altered sensorimotor processing in a mouse model of autism   | \$60,000  | Q2.Other                 | Louisiana State University School of Veterinary Medicine |
| Amygdala circuitry of impaired social-emotional behavior in autism   | \$58,488  | Q2.Other                 | Rosalind Franklin University of Medicine and Science     |
| Amygdala connectivity in autism spectrum disorder  | \$52,580  | Q2.L.A                   | University of California, Davis                          |
| Analysis of autism linked genes in C. elegans  | \$62,500  | Q2.Other                 | Massachusetts General Hospital                           |
| Analysis of MEF2 in cortical connectivity and autism-associated behaviors  | \$49,214  | Q2.S.D                   | Harvard Medical School                                   |
| Analysis of Shank3 complete and temporal and spatial specific knockout mice  | \$408,192 | Q2.Other                 | Duke University  |
| A neural model of fronto-parietal mirror neuron system dynamics  | \$178,100 | Q2.Other                 | University of Maryland, College Park                     |
| A neuroimaging study of twin pairs with autism   | \$599,326 | Q2.S.G                   | Stanford University                                      |
| Animal model of genetics and social behavior in autism spectrum disorders  | \$658,361 | Q2.S.G                   | Duke University  |
| A novel essential gene for human cognitive function  | \$47,232  | Q2.S.D                   | Harvard Medical School                                   |
| A Novel Glial Specific Isoform of Cdkl5: Implications for the Pathology of Autism in Rett Syndrome   | \$0       | Q2.S.D                   | University of Nebraska Medical Center                    |
| A novel transplantation assay to study human PTEN ASD alleles in GABAergic interneurons  | \$60,000  | Q2.Other                 | University of California, San Francisco                  |
| Anti-Neuronal Autoantibodies in PANDAS and Autism Spectrum Disorders   | \$100,000 | Q2.S.A                   | University of Oklahoma Health Sciences Center            |
| A preliminary investigation of the neurobehavioral basis of sensory behavior in autism   | \$20,000  | Q2.Other                 | Kennedy Krieger Institute                                |
| A Role for Cytoplasmic Rbfox1/A2BP1 in Autism  | \$0       | Q2.Other                 | University of California, Los Angeles                    |
| Artifacts as windows to other minds: Social reasoning in typical and ASD children  | \$49,214  | Q2.Other                 | Boston University  |
| ASD - Inflammatory Subtype: Molecular Mechanisms   | \$20,148  | Q2.S.A                   | Rutgers University                                       |
| Assessing sleep regulation, sleep-dependent memory consolidation, and sleep-dependent synaptic plasticity in mouse genetic models of schizophrenia and autism spectrum disorders | \$32,469  | Q2.S.E                   | University of Pennsylvania                               |
| Assessing the Cognitive Deficits Associated with 16p11.2 Deletion Syndrome   | \$59,734  | Q2.S.G                   | Posit Science Corporation                                |
| Assessment of glutamate delta-1 receptor in mental disorders   | \$218,250 | Q2.Other                 | Creighton University                                     |

| Project Title   | Funding     | Strategic Plan Objective | Institution  |
|---|-------------|--------------------------|--|
| A stem cell based platform for identification of common defects in autism spectrum disorders        | \$0         | Q2.S.D                   | The Scripps Research Institute - California                                  |
| Astrocyte function in genetic mouse models of autism spectrum disorders                             | \$394,063   | Q2.S.D                   | Cleveland Clinic Lerner College of Medicine, Case Western Reserve University |
| A study of autism   | \$0         | Q2.L.B                   | University of Pennsylvania   |
| A system-level approach for discovery of phenotype specific genetic variation in ASD                | \$29,500    | Q2.S.G                   | Hebrew University  |
| Attention & word learning in children with ASD- Translating experimental findings into intervention | \$53,500    | Q2.Other                 | Women & Infants Hospital   |
| Atypical architecture of prefrontal cortex in young children with autism                            | \$149,715   | Q2.Other                 | University of California, San Diego  |
| Auditory and integrative functions of the prefrontal cortex   | \$374,016   | Q2.Other                 | University of Rochester  |
| Auditory cortical plasticity in a mouse model of Rett syndrome                                      | \$43,501    | Q2.S.D                   | Cold Spring Harbor Laboratory  |
| AUTISM AND OBESITY: CO-OCCURRING CONDITIONS OR DRUG SIDE EFFECTS?                                   | \$99,820    | Q2.S.E                   | Children's Mercy Hospital  |
| Autism and the insula: Genomic and neural circuits  | \$0         | Q2.Other                 | California Institute of Technology   |
| Autism Biomarker Discovery Program  | \$1,999,984 | Q2.L.B                   | Seaside Therapeutics   |
| Autism Linked LRRTM4-Heparan Sulphate Proteoglycan Complex Functions in Synapse Development         | \$0         | Q2.S.G                   | University of British Columbia   |
| Autism phenotypes in Tuberous Sclerosis: Risk factors, features & architecture                      | \$149,999   | Q2.S.D                   | King's College London  |
| Autism spectrum disorders –inflammatory subtype: Molecular characterization                         | \$0         | Q2.S.A                   | University of Medicine & Dentistry of New Jersey                             |
| Autoimmunity against novel antigens in neuropsychiatric dysfunction                                 | \$307,200   | Q2.S.A                   | University of Pennsylvania   |
| Bayesian variable selection in generalized linear models with missing variables                     | \$229,953   | Q2.Other                 | Hunter College (City University of New York)                                 |
| BDNF and the restoration of synaptic plasticity in fragile X and autism                             | \$449,134   | Q2.S.D                   | University of California, Irvine   |
| Behavioral, fMRI, and anatomical MRI investigations of attention in autism                          | \$49,214    | Q2.Other                 | Massachusetts Institute of Technology  |
| Behavioral and cognitive characteristics of females and males with autism                           | \$0         | Q2.S.B                   | Cleveland Clinic Foundation  |
| Behavioral and neural correlates of reward motivation in children with autism spectrum disorders    | \$0         | Q2.Other                 | University of North Carolina at Chapel Hill                                  |
| Behavioral and neural processing of faces and expressions in nonhuman primates                      | \$334,541   | Q2.Other                 | Emory University   |
| Behavioral and neural responses to emotional faces in individuals with ASD                          | \$29,871    | Q2.Other                 | Harvard University   |
| Beta-catenin signaling in autism spectrum disorders   | \$60,100    | Q2.S.G                   | University of Illinois at Chicago  |

| Project Title   | Funding   | Strategic Plan Objective | Institution   |
|---|-----------|--------------------------|---|
| Bi-directional regulation of Ube3a stability by cyclic AMP-dependent kinase   | \$60,000  | Q2.S.D                   | University of North Carolina at Chapel Hill   |
| Biological determinants of brain variation in autism  | \$652,672 | Q2.S.G                   | University of Wisconsin - Madison   |
| Biology of non-coding RNAs associated with psychiatric disorders  | \$430,144 | Q2.Other                 | University of Southern California   |
| Bone marrow transplantation and the role of microglia in autism   | \$109,651 | Q2.S.A                   | University of Virginia  |
| Brain bases of language deficits in SLI and ASD   | \$583,471 | Q2.Other                 | Massachusetts Institute of Technology   |
| Brain-behavior interactions and visuospatial expertise in autism: a window into the neural basis of autistic cognition        | \$14,800  | Q2.Other                 | Hospital Riviere-des-Praires, University of Montreal, Canada                          |
| Brain electrophysiology of interactive social stimuli   | \$54,459  | Q2.Other                 | Yale University   |
| BRAIN MECHANISMS OF AFFECTIVE LANGUAGE COMPREHENSION IN AUTISM SPECTRUM DISORDERS   | \$506,507 | Q2.Other                 | University of Maryland, College Park  |
| Brain mitochondrial abnormalities in autism   | \$0       | Q2.S.A                   | New York State Institute for Basic Research in Developmental Disabilities             |
| Brain Systems Supporting Learning and Memory in Children with Autism  | \$173,607 | Q2.Other                 | Stanford University   |
| BRIGE: Emotion mapping of children through human-robot interaction and affective computing                                    | \$0       | Q2.Other                 | University of Louisville Research Foundation Inc                                      |
| Building awareness of the value of brain tissue donation for autism research  | \$360,525 | Q2.S.C                   | Autism Science Foundation   |
| Canonical neural computation in autism  | \$321,362 | Q2.Other                 | New York University   |
| CAREER: Dissecting the neural mechanisms for face detection   | \$0       | Q2.Other                 | California Institute of Technology  |
| CAREER: Integrative behavioural and neurophysiological studies of normal and autistic cognition using video game environments | \$0       | Q2.Other                 | Cornell University  |
| CAREER: Statistical models and classification of time-varying shape   | \$0       | Q2.Other                 | University of Utah  |
| CAREER: The role of prosody in word segmentation and lexical access   | \$0       | Q2.Other                 | Michigan State University   |
| CAREER: Typical and atypical development of brain regions for theory of mind  | \$148,521 | Q2.Other                 | Massachusetts Institute of Technology   |
| Caspr2 as an autism candidate gene: A proteomic approach to function & structure  | \$305,280 | Q2.Other                 | University of Medicine & Dentistry of New Jersey - Robert Wood Johnson Medical School |
| CDI-TYPE II: From language to neural representations of meaning   | \$0       | Q2.Other                 | Carnegie Mellon University  |
| Cell adhesion molecules in autism: A whole-brain study of genetic mouse models  | \$448,320 | Q2.Other                 | Cold Spring Harbor Laboratory   |
| Cell adhesion molecules in CNS development  | \$515,850 | Q2.Other                 | The Scripps Research Institute - California   |

| Project Title  | Funding   | Strategic Plan Objective | Institution  |
|--|-----------|--------------------------|--|
| Cellular density and morphology in the autistic temporal human cerebral cortex                       | \$352,346 | Q2.Other                 | University of California, Davis                                  |
| Cerebellar modulation of frontal cortical function   | \$286,989 | Q2.Other                 | University of Memphis  |
| Cerebellar plasticity and learning in a mouse model of autism  | \$0       | Q2.S.D                   | The University of Chicago  |
| Cerebellar plasticity and learning in a mouse model of autism  | \$62,500  | Q2.Other                 | University of Chicago  |
| Characterization of infants and toddlers with the 16p copy-number variation                          | \$149,372 | Q2.S.G                   | Boston Children's Hospital                                       |
| Characterization of the sleep phenotype in adolescents and adults with autism spectrum disorder      | \$150,000 | Q2.S.E                   | Vanderbilt University  |
| Characterizing 22q11.2 abnormalities   | \$62,498  | Q2.S.D                   | Children's Hospital of Philadelphia                              |
| Characterizing mechanistic heterogeneity across ADHD and autism                                      | \$556,250 | Q2.Other                 | Oregon Health & Science University                               |
| Characterizing sleep disorders in autism spectrum disorder   | \$75,107  | Q2.S.E                   | Stanford University  |
| Characterizing the genetic systems of autism through multi-disease analysis                          | \$503,306 | Q2.S.G                   | Harvard Medical School   |
| Characterizing the regulatory pathways and regulation of AUTS2                                       | \$0       | Q2.Other                 | University of California, San Francisco                          |
| Children with 7q11.23 duplication syndrome: shared characteristics with autism                       | \$250,000 | Q2.S.G                   | University of Louisville   |
| CIRCADIAN RHYTHMS IN CHILDREN WITH ASD AND THEIR INFANT SIBLINGS                                     | \$99,000  | Q2.S.E                   | Naval Medical Research Center                                    |
| CLARITY: circuit-dynamics and connectivity of autism-related behavior                                | \$248,468 | Q2.Other                 | Stanford University  |
| Classifying autism etiology by expression networks in neural progenitors and differentiating neurons | \$149,999 | Q2.Other                 | Massachusetts General Hospital                                   |
| CNTNAP2 regulates production, migration and organization of cortical neurons                         | \$62,496  | Q2.Other                 | Memorial Sloan-Kettering Cancer Center                           |
| Cognitive control of emotion in autism   | \$102,004 | Q2.Other                 | University of Pittsburgh   |
| Comprehensive phenotypic characterization of the 17q12 deletion syndrome                             | \$125,000 | Q2.S.G                   | Weis Center for Research - Geisinger Clinic                      |
| Computational characterization of language use in autism spectrum disorder                           | \$692,911 | Q2.Other                 | Oregon Health & Science University                               |
| Connections between autism, serotonin and hedgehog signaling   | \$124,401 | Q2.S.D                   | Medical Research Council-National Institute for Medical Research |
| Contribution of cerebellar CNTNAP2 to autism in a mouse model  | \$60,000  | Q2.Other                 | University of Oxford   |
| Controlling Interareal Gamma Coherence by Optogenetics, Pharmacology and Behavior                    | \$248,999 | Q2.Other                 | Princeton University   |

| Project Title  | Funding     | Strategic Plan Objective | Institution   |
|--|-------------|--------------------------|---|
| Convergence of immune and genetic signaling pathways in autism and schizophrenia               | \$29,430    | Q2.S.A                   | University of California, Davis                           |
| Correcting excitatory-inhibitory imbalance in autism   | \$112,500   | Q2.Other                 | University of North Carolina at Chapel Hill               |
| Cortactin and spine dysfunction in fragile X   | \$32,875    | Q2.S.D                   | University of California, Irvine                          |
| Cortico-striatal dysfunction in the eIF4E transgenic mouse model of autism                     | \$61,999    | Q2.S.D                   | New York University                                       |
| Corticothalamic circuit interactions in autism   | \$200,000   | Q2.Other                 | Boston Children's Hospital                                |
| Cytoplasmic functions of Rbfox1, a candidate autism gene                                       | \$231,000   | Q2.Other                 | University of California, Los Angeles                     |
| Deciphering the function and regulation of AUTS2   | \$0         | Q2.Other                 | University of California, San Francisco                   |
| Denritic Cell Function in Autism   | \$26,920    | Q2.S.A                   | MIND Institute  |
| Determining the role of GABA in four animal models of autism                                   | \$166,895   | Q2.Other                 | Neurochlore   |
| Developmental neurogenetics in adolescents with autism   | \$249,603   | Q2.S.G                   | Yale University   |
| Development of a connectomic functional brain imaging endophenotype of autism                  | \$13,634    | Q2.Other                 | University of Cambridge                                   |
| Development of face processing expertise   | \$339,118   | Q2.Other                 | University of Toronto                                     |
| Development of the functional neural systems for face expertise                                | \$461,095   | Q2.Other                 | University of California, San Diego                       |
| Development of ventral stream organization   | \$137,338   | Q2.Other                 | University of Pittsburgh                                  |
| Development of vision and attention in typical and ASD individuals                             | \$305,682   | Q2.S.G                   | Brown University  |
| Direct recording from autism brains  | \$120,148   | Q2.S.E                   | California Institute of Technology                        |
| DISRUPTION OF TROPHIC INHIBITORY SIGNALING IN AUTISM SPECTRUM DISORDERS                        | \$180,832   | Q2.Other                 | Northwestern University                                   |
| Dissecting neural mechanisms integrating multiple inputs in C. elegans                         | \$477,449   | Q2.Other                 | Salk Institute for Biological Studies                     |
| Dissecting Reciprocal CNVs Associated With Autism  | \$0         | Q2.Other                 | Duke University   |
| Dual modulators of GABA-A and Alpha7 nicotinic receptors for treating autism                   | \$0         | Q2.Other                 | University of California, Irvine                          |
| Dynamic regulation of Shank3 and ASD   | \$604,587   | Q2.Other                 | Johns Hopkins University                                  |
| Dysfunction of sensory inhibition in autism  | \$258,134   | Q2.Other                 | Johns Hopkins University                                  |
| Dysregulated Translation and Synaptic Dysfunction in Medium Spiny Neurons of Autism Model Mice | \$0         | Q2.Other                 | New York University                                       |
| Dysregulation of mTOR signaling in fragile X syndrome  | \$467,760   | Q2.S.D                   | Albert Einstein College of Medicine of Yeshiva University |
| Dysregulation of protein synthesis in fragile X syndrome                                       | \$1,089,880 | Q2.S.D                   | National Institutes of Health                             |
| Early life seizures disrupt critical period plasticity   | \$429,559   | Q2.S.E                   | University of Pennsylvania                                |
|  |             |                          |   |

| Project Title   | Funding   | Strategic Plan Objective | Institution  |
|---|-----------|--------------------------|--|
| EEG-based assessment of functional connectivity in autism   | \$175,176 | Q2.Other                 | Kennedy Krieger Institute                              |
| Effect of paternal age on mutational burden and behavior in mice                                      | \$177,600 | Q2.Other                 | University of North Carolina at Chapel Hill            |
| Electrophysiological response to executive control training in autism                                 | \$89,670  | Q2.Other                 | University of Washington                               |
| Electrophysiologic biomarkers of language function in autism spectrum disorders                       | \$28,600  | Q2.L.B                   | University of California, Los Angeles                  |
| Elucidating the function of class 4 semaphorins in GABAergic synapse formation                        | \$325,130 | Q2.Other                 | Brandeis University                                    |
| Elucidation and rescue of amygdala abnormalities in the Fmr1 mutant mouse model of fragile X syndrome | \$0       | Q2.S.D                   | George Washington University                           |
| Emergence and stability of autism in fragile X syndrome   | \$343,680 | Q2.S.D                   | University of South Carolina                           |
| Engagement of Social Cognitive Networks during Game Play in Autism                                    | \$0       | Q2.Other                 | Duke University  |
| Engrailed genes and cerebellum morphology, spatial gene expression and circuitry                      | \$451,202 | Q2.Other                 | Sloan-Kettering Institute for Cancer Research          |
| Engrailed targets and the control of synaptic circuits in Drosophila                                  | \$361,875 | Q2.Other                 | University of Puerto Rico Medical Sciences Campus      |
| Enhancing neurobehavioural and clinical definitions in autism spectrum disorders                      | \$14,000  | Q2.Other                 | Monash University                                      |
| ERK signaling in autism associated with copy number variation of 16p11.2                              | \$0       | Q2.Other                 | Case Western Reserve University                        |
| Evaluating the time-dependent unfolding of social interactions in autism                              | \$196,987 | Q2.Other                 | University of Cincinnati                               |
| Examining connectivity patterns of brain networks participating in social cognition in ASD            | \$0       | Q2.Other                 | San Diego State University                             |
| Executive function in children with typical and atypical language abilities                           | \$493,697 | Q2.Other                 | University of Wisconsin - Madison                      |
| Experience and cognitive development in infancy   | \$0       | Q2.Other                 | University of California, Davis                        |
| Exploring metabolic dysfunction in the brains of people with autism                                   | \$0       | Q2.S.A                   | George Washington University                           |
| Face perception: Mapping psychological spaces to neural responses                                     | \$0       | Q2.Other                 | Stanford University                                    |
| Factors influencing early associative learning as a precursor to social behavior heterogeneity        | \$54,500  | Q2.S.G                   | University of Southern California                      |
| Fever, meningeal immunity and immune factors in autism  | \$59,500  | Q2.S.A                   | University of Virginia                                 |
| Folate receptor autoimmunity in Autism Spectrum Disorders   | \$149,755 | Q2.S.A                   | State University of New York, Downstate Medical Center |
| Foundation Associates agreement (BrainNet)  | \$250,000 | Q2.S.C                   | Foundation Associates, LLC                             |

| Project Title   | Funding     | Strategic Plan Objective | Institution                                 |
|---|-------------|--------------------------|---|
| Foxp2 regulation of sex specific transcriptional pathways and brain development                 | \$88,128    | Q2.S.B                   | University of Maryland, Baltimore           |
| Fragile X syndrome target analysis and its contribution to autism                               | \$259,025   | Q2.S.D                   | Vanderbilt University                       |
| Frontostriatal synaptic dysfunction in a model of autism  | \$52,190    | Q2.Other                 | Stanford University                         |
| Functional analysis of EFR3A mutations associated with autism                                   | \$62,500    | Q2.Other                 | Yale University                             |
| Functional analysis of EPHB2 mutations in autism  | \$124,950   | Q2.Other                 | McLean Hospital                             |
| Functional analysis of EPHB2 mutations in autism - Project 1                                    | \$89,633    | Q2.Other                 | Yale University                             |
| Functional anatomy of face processing in the primate brain                                      | \$1,555,641 | Q2.Other                 | National Institutes of Health               |
| Functional and anatomical recovery of synaptic deficits in a mouse model of Angelman Syndrome   | \$58,000    | Q2.S.D                   | University of North Carolina at Chapel Hill |
| Functional Connectivity during Working Memory in Children with ASD: A NIRS Study                | \$29,500    | Q2.Other                 | Georgetown University                       |
| Functional connectivity in autism spectrum disorders  | \$251,250   | Q2.Other                 | Children's Hospital of Philadelphia         |
| Functional connectivity substrates of social and non-social deficits in ASD                     | \$719,629   | Q2.Other                 | Massachusetts General Hospital              |
| Function and dysfunction of neuroligins in synaptic circuits                                    | \$450,000   | Q2.Other                 | Stanford University                         |
| Function and structure adaptations in forebrain development                                     | \$520,098   | Q2.Other                 | University of Southern California           |
| Function of neurexins   | \$461,977   | Q2.Other                 | Stanford University                         |
| GABA and Gamma-band Activity: Biomarker for ASD?  | \$25,000    | Q2.S.D                   | University of Pennsylvania                  |
| GABAergic dysfunction in autism   | \$50,000    | Q2.Other                 | Johns Hopkins University                    |
| GABRB3 and placental vulnerability in ASD   | \$523,820   | Q2.S.A                   | Stanford University                         |
| GABRB3 and prenatal immune events leading to autism   | \$62,500    | Q2.S.A                   | Stanford University                         |
| Genetically defined stem cell models of Rett and fragile X syndrome                             | \$350,000   | Q2.S.D                   | Whitehead Institute for Biomedical Research |
| Genetic and developmental analyses of fragile X mental retardation protein                      | \$378,771   | Q2.S.D                   | Vanderbilt University Medical Center        |
| Genetic contribution to language-related preclinical biomarkers of autism                       | \$63,513    | Q2.S.D                   | University of Pennsylvania                  |
| Genetic-imaging study of obsessive compulsive behavior in autism                                | \$360,826   | Q2.Other                 | Brown University                            |
| Genetic investigations of motor stereotypies  | \$124,538   | Q2.S.G                   | Yale University                             |
| Genetic models of autism in human neural progenitor cells: a platform for therapeutic discovery | \$54,400    | Q2.Other                 | University of California, Los Angeles       |
|   |             |                          |   |



| Project Title   | Funding   | Strategic Plan Objective | Institution  |
|---|-----------|--------------------------|--|
| Genetic model to study the ASD-associated gene A2BP1 and its target PAC1                            | \$125,000 | Q2.Other                 | Weizmann Institute of Science                          |
| Genetic studies of autism-related Drosophila neuroligin and neuroligin                              | \$175,802 | Q2.Other                 | University of Texas Health Science Center, San Antonio |
| Genome-wide identification of variants affecting early human brain development                      | \$590,292 | Q2.S.G                   | University of North Carolina at Chapel Hill            |
| Genotype-phenotype relationships in fragile X families  | \$565,457 | Q2.S.D                   | University of California, Davis                        |
| Gesture as a forerunner of linguistic change- insights from autism                                  | \$385,000 | Q2.L.A                   | Georgia State University                               |
| Grammatical development in boys with fragile X syndrome and autism                                  | \$141,075 | Q2.S.D                   | University of Wisconsin - Madison                      |
| HCC:Small:Computational studies of social nonverbal communication                                   | \$0       | Q2.Other                 | University of Southern California                      |
| High metabolic demand of fast-spiking cortical interneurons underlying the etiology of autism       | \$56,000  | Q2.Other                 | Weill Cornell Medical College                          |
| High throughput screen for small molecule probes for neural network development                     | \$388,800 | Q2.Other                 | Johns Hopkins University                               |
| High throughput sequencing of autism spectrum disorder (ASD) endophenotypes                         | \$39,432  | Q2.S.G                   | Baylor College of Medicine                             |
| Hippocampal mechanisms of social learning in animal models of autism                                | \$62,500  | Q2.Other                 | Baylor College of Medicine                             |
| How autism affects speech understanding in multitaler environments                                  | \$0       | Q2.Other                 | University of Maryland, College Park                   |
| Hyperthermia and the amelioration of autism symptoms  | \$66,153  | Q2.S.A                   | Montefiore Medical Center                              |
| Identification and analysis of ASD patients with PI3K/mTOR signalopathies                           | \$66,500  | Q2.Other                 | Emory University                                       |
| Identification and Functional Analysis of Risk Genes for Autistic Macrocephaly                      | \$0       | Q2.S.G                   | Institute of Psychiatry/King's College London          |
| Identification of candidate genes at the synapse in autism spectrum disorders                       | \$168,245 | Q2.S.G                   | Yale University  |
| Identification of genes responsible for a genetic cause of autism                                   | \$125,000 | Q2.Other                 | Case Western Reserve University                        |
| Identifying the gene in 17q12 responsible for neuropsychiatric phenotypes                           | \$228,375 | Q2.S.G                   | Geisinger Clinic                                       |
| IL-1beta and IL1RAPL1: Gene-environment interactions regulating synapse density and function in ASD | \$28,600  | Q2.S.A                   | University of California, Davis                        |
| Imaging-based real-time feedback to enhance therapeutic intervention in ASD                         | \$59,825  | Q2.L.B                   | Stanford University                                    |
| IMAGING DEPRESSION IN ADULTS WITH ASD   | \$192,601 | Q2.S.E                   | State University New York Stony Brook                  |
| Imaging signal transduction in single dendritic spines  | \$449,208 | Q2.Other                 | Max Planck Florida Corporation                         |
|   |           |                          |  |

| Project Title   | Funding   | Strategic Plan Objective | Institution                                     |
|---|-----------|--------------------------|---|
| Impact of NR2B mutations on NMDA receptors and synapse formation  | \$60,000  | Q2.Other                 | Case Western Reserve University                 |
| Impact of SynGAP1 mutations on synapse maturation and cognitive development   | \$661,570 | Q2.Other                 | The Scripps Research Institute - Florida        |
| Impairments of theory of mind disrupt patterns of brain activity  | \$308,160 | Q2.Other                 | Massachusetts Institute of Technology           |
| Influence of attention and arousal on sensory abnormalities in ASD  | \$186,000 | Q2.Other                 | University of California, San Diego             |
| Inhibitory mechanisms for sensory map plasticity in cerebral cortex   | \$316,453 | Q2.Other                 | University of California, Berkeley              |
| Integrative functions of the planum temporale   | \$432,343 | Q2.Other                 | University of California, Irvine                |
| Integrative Regulatory Network Analysis of iPSCs Derived Neuronal Progenitors from Macrocephalic ASD Individuals in a Family-based Design | \$0       | Q2.Other                 | Yale University                                 |
| Interneuron subtype-specific malfunction in autism spectrum disorders   | \$120,000 | Q2.Other                 | New York University School of Medicine          |
| Investigating brain connectivity in autism at the whole-brain level   | \$232,307 | Q2.Other                 | Indiana University                              |
| Investigating brain organization and activation in autism at the whole-brain level  | \$30,000  | Q2.Other                 | California Institute of Technology              |
| Investigating the etiology of childhood disintegrative disorder   | \$74,970  | Q2.S.F                   | Yale University                                 |
| Investigating the role of neurexin-1 mutation in autism using human induced neuro   | \$49,214  | Q2.Other                 | Stanford University                             |
| Investigating the Role of RBFOX1 in Autism Etiology   | \$0       | Q2.Other                 | University of Miami                             |
| Investigation of a possible role of the protocadherin gene cluster in autism  | \$150,000 | Q2.Other                 | Columbia University                             |
| Investigation of protocadherin-10 in MEF2- and FMRP-mediated synapse elimination  | \$55,670  | Q2.S.D                   | University of Texas Southwestern Medical Center |
| Investigation of sex differences associated with autism candidate gene, Cyfip1  | \$32,413  | Q2.S.B                   | University of California, Los Angeles           |
| Investigation of social brain circuits and fever-evoked response in 16p11.2 mice  | \$0       | Q2.Other                 | Cold Spring Harbor Laboratory                   |
| In-vivo MRS assay of brain glutamate-GABA balance and drug response in autism   | \$58,561  | Q2.L.B                   | King's College London                           |
| Kinetics of drug macromolecule complex formation  | \$687,969 | Q2.Other                 | University of California, San Diego             |
| Language development in fragile X syndrome  | \$509,862 | Q2.S.D                   | University of California, Davis                 |
| Language processing in children with 22q11 deletion syndrome and autism   | \$0       | Q2.S.G                   | Emory University                                |
| Learning and plasticity in the human brain  | \$392,666 | Q2.Other                 | National Institutes of Health                   |
|   |           |                          |   |

| Project Title  | Funding   | Strategic Plan Objective | Institution                                     |
|--|-----------|--------------------------|---|
| Linking circuit dynamics and behavior in a rat model of autism                                       | \$0       | Q2.S.D                   | University of California, San Francisco         |
| Linking genetic mosaicism, neural circuit abnormalities and behavior                                 | \$62,500  | Q2.S.D                   | Brown University                                |
| Linking local activity and functional connectivity in autism   | \$360,142 | Q2.Other                 | San Diego State University                      |
| Local connectivity in altered excitation/inhibition balance states                                   | \$125,000 | Q2.Other                 | Weizmann Institute of Science                   |
| Local functional connectivity in the brains of people with autism                                    | \$108,297 | Q2.L.B                   | Massachusetts General Hospital                  |
| Longitudinal characterization of functional connectivity in autism                                   | \$182,352 | Q2.L.A                   | University of Utah                              |
| Longitudinal MRI study of brain development in fragile X   | \$748,506 | Q2.S.D                   | Stanford University                             |
| Macrocephalic autism: Exploring and exploiting the role of PTEN                                      | \$0       | Q2.Other                 | University of Wisconsin - Madison               |
| Magnetoencephalographic studies of lexical processing and abstraction in autism                      | \$291,317 | Q2.Other                 | University of Pennsylvania                      |
| Mapping functional connectivity networks in autism spectrum disorder with diffuse optical tomography | \$56,900  | Q2.Other                 | Washington University in St. Louis              |
| Mapping functional neural circuits that mediate social behaviors in autism                           | \$62,500  | Q2.Other                 | Duke University Medical Center                  |
| MATERNAL BRAIN-REACTIVE ANTIBODIES AND AUTISM SPECTRUM DISORDER                                      | \$190,577 | Q2.S.A                   | Feinstein Institute for Medical Research        |
| Mathematical cognition in autism: A cognitive and systems neuroscience approach                      | \$610,784 | Q2.Other                 | Stanford University                             |
| Matrix metalloproteinases expression in autism spectrum disorders                                    | \$15,000  | Q2.Other                 | University of Naples                            |
| Mechanism of UBE3A imprint in neurodevelopment   | \$7,869   | Q2.S.D                   | University of California, Davis                 |
| Mechanisms of mGluR5 function and dysfunction in mouse autism models                                 | \$393,841 | Q2.S.D                   | University of Texas Southwestern Medical Center |
| Mechanisms of mitochondrial dysfunction in autism  | \$0       | Q2.S.A                   | Georgia State University                        |
| Mechanisms of motor skill learning in the fragile X mouse model                                      | \$292,423 | Q2.S.D                   | University of Nebraska Medical Center           |
| Mechanisms of synapse elimination by autism-linked genes   | \$240,115 | Q2.S.D                   | University of Texas Southwestern Medical Center |
| Mechanisms of synaptic alterations in a neuroinflammation model of autism                            | \$0       | Q2.S.A                   | University of Nebraska Medical Center           |
| Mechanisms Underlying the Cerebellar Contribution to Autism in Mouse Models of Tu                    | \$190,458 | Q2.S.D                   | Boston Children's Hospital                      |
| MeCP2 modulation of BDNF signaling: Shared mechanisms of Rett and autism                             | \$303,067 | Q2.S.D                   | University of Alabama at Birmingham             |
|  |           |                          |   |

| Project Title   | Funding   | Strategic Plan Objective | Institution   |
|---|-----------|--------------------------|---|
| Mesocorticolimbic dopamine circuitry in mouse models of autism  | \$349,295 | Q2.S.D                   | Stanford University                                       |
| Met signaling in neural development and circuitry formation   | \$230,032 | Q2.Other                 | University of Arizona                                     |
| MicroRNAs in synaptic plasticity and behaviors relevant to autism   | \$131,220 | Q2.S.D                   | Massachusetts General Hospital                            |
| Mitochondrial dysfunction due to aberrant mTOR-regulated mitophagy in autism  | \$183,568 | Q2.S.A                   | Columbia University                                       |
| Modeling 5-HT-absorbing neurons in neuropathology of autism   | \$200,400 | Q2.Other                 | Albert Einstein College of Medicine of Yeshiva University |
| Modeling alteration of RBFOX1 (A2BP1) target network in autism  | \$60,000  | Q2.Other                 | Columbia University                                       |
| Modeling multiple heterozygous genetic lesions in autism using Drosophila melanogaster  | \$201,838 | Q2.Other                 | University of California, Los Angeles                     |
| Modeling Pitt-Hopkins Syndrome, an Autism Spectrum Disorder, in Transgenic Mice Harboring a Pathogenic Dominant Negative Mutation in TCF4 | \$0       | Q2.S.D                   | University of North Carolina, Chapel Hill                 |
| Modulation of RhoA signaling by the mRNA binding protein hnRNPQ1  | \$30,912  | Q2.S.D                   | Emory University  |
| Molecular analysis of gene-environment interactions in the intestines of children with autism   | \$150,000 | Q2.S.E                   | Columbia University                                       |
| Molecular dissection of calmodulin domain functions   | \$310,222 | Q2.Other                 | University of Iowa  |
| Molecular mechanisms linking early life seizures, autism and intellectual disability  | \$313,576 | Q2.S.E                   | University of Colorado Denver                             |
| Molecular mechanisms of electrical synapse formation in vivo  | \$90,000  | Q2.Other                 | Fred Hutchinson Cancer Research Center                    |
| Molecular mechanisms of the synaptic organizer alpha-neurexin   | \$373,200 | Q2.Other                 | University of Michigan                                    |
| Molecular signatures of autism genes and the 16p11.2 deletion   | \$62,500  | Q2.Other                 | Massachusetts General Hospital                            |
| Monoallelic expression in neurons derived from induced pluripotent stem cells   | \$404,100 | Q2.Other                 | Albert Einstein College of Medicine of Yeshiva University |
| Monolingual and bilingual infants' sensitivity to agreement morphology in Spanish   | \$137,605 | Q2.Other                 | Florida International University                          |
| Morphogenesis and function of the cerebral cortex   | \$393,228 | Q2.Other                 | Yale University   |
| Motor control and cerebellar maturation in autism   | \$157,148 | Q2.Other                 | University of Texas Southwestern Medical Center           |
| Motor cortex plasticity in MeCP2 duplication syndrome   | \$125,000 | Q2.S.D                   | Baylor College of Medicine                                |
| Mouse Model of Dup15q Syndrome  | \$84,253  | Q2.S.D                   | Texas AgriLife Research                                   |
| MRI: Acquisition of an Infrared Eye Tracker to Study the Emergence, Use, Loss, and Requisition of Communication Skills                    | \$41,575  | Q2.Other                 | Emerson College   |

| Project Title  | Funding   | Strategic Plan Objective | Institution   |
|--|-----------|--------------------------|---|
| MRI biomarkers of patients with tuberous sclerosis complex and autism  | \$720,276 | Q2.S.D                   | Boston Children's Hospital  |
| mTOR modulation of myelination   | \$178,659 | Q2.S.D                   | Vanderbilt University Medical Center  |
| Multigenic basis for autism linked to 22q13 chromosomal region   | \$250,000 | Q2.S.D                   | Hunter College of the City University of New York (CUNY) jointly with Research Foundation of CUNY |
| Multimodal imaging of social brain networks in ASD   | \$148,945 | Q2.Other                 | San Diego State University  |
| Multimodal neuroimaging of motor dysfunction in autism spectrum disorders                                    | \$58,000  | Q2.Other                 | University of Colorado Denver   |
| Multiple systems in theory of mind development   | \$0       | Q2.Other                 | Rutgers, The State University of New Jersey - New Brunswick                                       |
| Multisensory processing in autism  | \$0       | Q2.Other                 | Baylor College of Medicine  |
| Mutations associated with carnitine deficiency: risk factor for regression in ASD                            | \$78,650  | Q2.S.F                   | Baylor College of Medicine  |
| Near-infrared spectroscopy studies of early neural signatures of autism                                      | \$149,977 | Q2.L.B                   | Yale University   |
| Networked cortical responses to movement associated with ASD   | \$384,222 | Q2.Other                 | University of Washington  |
| Network Optimization of Functional Connectivity in Neuroimaging for Differential Diagnosis of Brain Diseases | \$345,000 | Q2.Other                 | University of Washington  |
| Neural basis of behavioral flexibility   | \$347,607 | Q2.Other                 | Mount Sinai School of Medicine  |
| Neural basis of cross-modal influences on perception   | \$163,755 | Q2.Other                 | University of California, San Diego   |
| Neural circuits that regulate social motivation in autism  | \$150,542 | Q2.Other                 | University of North Carolina at Chapel Hill   |
| Neural Correlates of Imitation in Children with Autism and their Unaffected Siblings                         | \$28,600  | Q2.L.B                   | Harvard University  |
| Neural markers of shared gaze during simulated social interactions in ASD                                    | \$416,250 | Q2.Other                 | Yale University   |
| Neural mechanisms of tactile sensation in rodent somatosensory cortex  | \$246,278 | Q2.Other                 | University of California, Berkeley  |
| Neural mechanisms underlying autism behaviors in SCN1A mutant mice   | \$194,903 | Q2.S.D                   | University of Washington  |
| Neural synchronydysfunction of gamma oscillations in autism  | \$254,470 | Q2.Other                 | University of Colorado Denver   |
| Neural underpinning of emotion perception and its disorders  | \$15,000  | Q2.Other                 | Dartmouth College   |
| Neurexin-neurologin trans-synaptic interaction in learning and memory  | \$100,000 | Q2.Other                 | Columbia University   |
| Neurobehavioral investigation of tactile features in autism spectrum disorders                               | \$161,107 | Q2.Other                 | Vanderbilt University Medical Center  |
| Neurobiological mechanism of 15q11-13 duplication autism spectrum disorder                                   | \$367,304 | Q2.S.D                   | Beth Israel Deaconess Medical Center  |

| Project Title   | Funding     | Strategic Plan Objective | Institution   |
|---|-------------|--------------------------|---|
| Neurobiology of aggression co-morbidity in mouse model of idic15 autism                               | \$261,000   | Q2.S.E                   | Beth Israel Deaconess Medical Center                      |
| Neurobiology of RAI1, the causal gene for Smith-Magenis syndrome                                      | \$62,314    | Q2.S.D                   | Stanford University                                       |
| Neuroendocrine regulation of metabolism and neurocognition  | \$355,088   | Q2.S.E                   | National Institutes of Health                             |
| Neuroimaging of top-down control and bottom-up processes in childhood ASD                             | \$371,791   | Q2.Other                 | Georgetown University                                     |
| Neuroimmunologic investigations of autism spectrum disorders (ASD)                                    | \$162,856   | Q2.S.F                   | National Institutes of Health                             |
| Neurologin, oxidative stress and autism   | \$150,000   | Q2.Other                 | Oklahoma Medical Research Foundation                      |
| Neuronal basis of vicarious reinforcement dysfunction in autism spectrum disorder                     | \$297,527   | Q2.Other                 | Duke University   |
| Neuropathology of the social-cognitive network in Autism: a comparison with other structural theories | \$143,728   | Q2.Other                 | University of Oxford                                      |
| Neuropeptide regulation of juvenile social behaviors  | \$14,775    | Q2.Other                 | Boston College  |
| Neuroprotective effects of oxytocin receptor signaling in the enteric nervous system                  | \$0         | Q2.Other                 | Columbia University                                       |
| New approaches to local translation: SpaceSTAMP of proteins synthesized in axons                      | \$401,927   | Q2.S.D                   | Dana-Farber Cancer Institute                              |
| NINDS comment: Disruption of Reelin biosynthesis by de novo missense mutations found in aut           | \$32,615    | Q2.Other                 | State University of New York Upstate Medical Center       |
| Novel candidate mechanisms of fragile X syndrome  | \$249,000   | Q2.S.D                   | University of Michigan                                    |
| Novel computational methods for higher order diffusion MRI in autism                                  | \$601,657   | Q2.Other                 | University of Pennsylvania                                |
| Novel regulatory network involving non-coding role of an ASD candidate gene PTEN                      | \$240,480   | Q2.Other                 | Albert Einstein College of Medicine of Yeshiva University |
| Olfactory abnormalities in the modeling of Rett syndrome  | \$339,270   | Q2.S.D                   | Johns Hopkins University                                  |
| Optogenetic treatment of social behavior in autism  | \$385,000   | Q2.Other                 | University of California, Los Angeles                     |
| Pathogenic roles of paternal-age-associated mutations in autism                                       | \$62,500    | Q2.Other                 | Weill Cornell Medical College                             |
| Pathologic and genetic characterization of novel brain cortical patches in young autistic brains      | \$53,000    | Q2.Other                 | University of California, San Francisco                   |
| Pediatric brain imaging   | \$2,140,977 | Q2.L.A                   | National Institutes of Health                             |
| Perturbation of Excitatory Synapse Formation in Autism Spectrum Disorders                             | \$0         | Q2.Other                 | Max Planck Florida Institute for Neuroscience             |
| Phagocytosis is misregulated in a Drosophila model of Fragile X syndrome                              | \$47,232    | Q2.S.D                   | Columbia University                                       |
| Phenotypic characterization of MECP2 mice   | \$64,742    | Q2.S.D                   | Children's Hospital of Philadelphia                       |
|   |             |                          |   |

| Project Title  | Funding   | Strategic Plan Objective | Institution   |
|--|-----------|--------------------------|---|
| Physiological studies in a human stem cell model of 15q duplication syndrome   | \$60,000  | Q2.S.D                   | University of Connecticut   |
| Physiology of attention and regulation in children with ASD and LD   | \$327,380 | Q2.Other                 | Seattle Children's Hospital                                       |
| Platform for autism treatments from exome analysis   | \$100,000 | Q2.S.E                   | Rockefeller University  |
| Pleiotropic roles of dyslexia genes in neurodevelopmental language impairments   | \$36,724  | Q2.S.D                   | Yale University   |
| Pragmatic language and social-emotional processing in autism, fragile X, and the FMR1 premutation  | \$29,474  | Q2.S.D                   | Northwestern University   |
| Pragmatics and semantics in autism spectrum disorder   | \$27,487  | Q2.Other                 | City University of New York Graduate School and University Center |
| PRECURSORS TO THE DEVELOPMENT OF ANXIETY DISORDERS IN YOUNG CHILDREN WITH AUTISM SPECTRUM DISORDER   | \$515,246 | Q2.S.E                   | University of North Carolina at Chapel Hill                       |
| PRECURSORS TO THE DEVELOPMENT OF ANXIETY DISORDERS IN YOUNG CHILDREN WITH AUTISM SPECTRUM DISORDER   | \$589,750 | Q2.S.E                   | Duke University   |
| PRECURSORS TO THE DEVELOPMENT OF ANXIETY DISORDERS IN YOUNG CHILDREN WITH AUTISM SPECTRUM DISORDER   | \$173,826 | Q2.S.E                   | Duke University   |
| Predicting phenotypic trajectories in Prader-Willi syndrome  | \$294,904 | Q2.S.D                   | Vanderbilt University Medical Center                              |
| Preference acquisition in children and adolescents with and without autism spectrum disorder   | \$0       | Q2.Other                 | Dalhousie University  |
| Presynaptic Fragile X Proteins   | \$249,000 | Q2.S.D                   | Drexel University   |
| Probing synaptic receptor composition in mouse models of autism  | \$249,995 | Q2.S.D                   | Boston Children's Hospital  |
| Probing the Molecular Mechanisms Underlying Autism: Examination of Dysregulated Protein Synthesis  | \$49,300  | Q2.S.D                   | National Institute of Mental Health (NIH)                         |
| Probing the neural basis of social behavior in mice  | \$125,000 | Q2.S.D                   | Massachusetts Institute of Technology                             |
| Probing the temporal dynamics of aberrant neural communication and its relation to social processing deficits in autism spectrum disorders | \$29,987  | Q2.Other                 | University of Pittsburgh  |
| Project 3: Immune environment interaction and neurodevelopment   | \$109,725 | Q2.S.A                   | University of California, Davis                                   |
| Project 4: Calcium signaling defects in autism (Pessah/Lein)   | \$109,730 | Q2.Other                 | University of California, Davis                                   |
| Prostaglandins and cerebellum development  | \$356,400 | Q2.S.A                   | University of Maryland, Baltimore                                 |
| Protein interaction networks in autism   | \$62,500  | Q2.Other                 | Harvard Medical School  |
| Psychobiological investigation of the socioemotional functioning in autism   | \$333,590 | Q2.Other                 | Vanderbilt University Medical Center                              |
|  |           |                          |   |

| Project Title   | Funding   | Strategic Plan Objective | Institution   |
|---|-----------|--------------------------|---|
| Quantifiable markers of ASD via multivariate MEG-DTI combination                      | \$257,169 | Q2.L.B                   | University of Pennsylvania  |
| Refining the Tourette Syndrome phenotype across diagnoses to aid gene discovery       | \$417,271 | Q2.Other                 | University of California, San Francisco   |
| Regulation of cortical critical periods in a mouse model of autism                    | \$0       | Q2.S.D                   | Northwestern University   |
| Regulation of Interneuron Development in the Cortex and Basal Ganglia by Coup-TF2     | \$0       | Q2.Other                 | University of California, San Francisco   |
| Regulation of spine morphogenesis by NrCAM  | \$213,120 | Q2.Other                 | University of North Carolina at Chapel Hill                                     |
| Relating copy number variants to head and brain size in neuropsychiatric disorders    | \$399,146 | Q2.S.G                   | University of California, San Diego   |
| Reliability of Sensory-Evoked Activity in Autism Spectrum Disorders- Project 1        | \$0       | Q2.L.B                   | Carnegie Mellon University  |
| Restoring cortical plasticity in a Rett mouse model                                   | \$60,000  | Q2.S.D                   | Stanford University   |
| Retrograde synaptic signaling by Neurexin and Neuroligin in C. elegans                | \$125,000 | Q2.Other                 | Massachusetts General Hospital  |
| Revealing protein synthesis defects in fragile X syndrome with new chemical tools     | \$337,091 | Q2.S.D                   | Stanford University   |
| RI: Small: Addressing visual analogy problems on the raven's intelligence test        | \$0       | Q2.Other                 | Georgia Tech Research Corporation   |
| RNA dysregulation in autism   | \$250,000 | Q2.Other                 | The Rockefeller University  |
| RNA expression at human fragile X synapses  | \$59,217  | Q2.S.D                   | University of North Carolina at Chapel Hill and North Carolina State University |
| Role of astrocytic glutamate transporter GLT1 in Fragile X                            | \$5,000   | Q2.S.D                   | Tufts University  |
| Role of CNTNAP2 in neuronal structural development and synaptic transmission          | \$55,200  | Q2.Other                 | Stanford University   |
| Role of endosomal NHE6 in brain connectivity and autism                               | \$62,500  | Q2.Other                 | Brown University  |
| Role of GABA interneurons in a genetic model of autism                                | \$62,500  | Q2.S.D                   | Yale University   |
| Role of LIN28/let-7 axis in autism  | \$62,500  | Q2.Other                 | Johns Hopkins University School of Medicine                                     |
| Role of major vault protein in autism   | \$0       | Q2.Other                 | Yale University   |
| Role of MEF2 and neural activity in cortical synaptic weakening and elimination       | \$415,385 | Q2.S.D                   | University of Texas Southwestern Medical Center                                 |
| Role of microglia and complement at developing synapses in ASD                        | \$122,500 | Q2.S.A                   | Boston Children's Hospital  |
| Role of myelinating cells in autism spectrum disorders                                | \$60,000  | Q2.S.G                   | University of California, San Francisco   |
| Role of negative regulators of FGF signaling in frontal cortex development and autism | \$15,000  | Q2.Other                 | University of California, San Francisco   |
| Role of neurexin in synapse formation and maintenance                                 | \$53,942  | Q2.Other                 | Stanford University   |



| Project Title   | Funding     | Strategic Plan Objective | Institution   |
|---|-------------|--------------------------|---|
| Role of neurexin in the amygdala and associated fear memory   | \$0         | Q2.Other                 | Columbia University                                       |
| Role of neuronal migration genes in synaptogenesis and plasticity   | \$53,942    | Q2.Other                 | Weill Cornell Medical College                             |
| Role of Sema7A in functional organization of neocortex  | \$366,120   | Q2.S.D                   | Mount Sinai School of Medicine                            |
| Role of Serotonin Signaling during Neural Circuitry Formation in Autism Spectrum Disorders  | \$0         | Q2.S.D                   | Massachusetts Institute of Technology                     |
| Role of the 16p11.2 CNV in autism: genetic, cognitive and synaptic/circuit analyses   | \$0         | Q2.S.G                   | Broad Institute, Inc.                                     |
| Roles of miRNAs in regulation of Foxp2 and in autism  | \$15,000    | Q2.Other                 | Louisiana State University                                |
| Roles of pro-inflammatory Th17 cells in autism  | \$124,989   | Q2.S.A                   | New York University                                       |
| Salivary melatonin as a biomarker for response to sleep interventions in children with autism   | \$0         | Q2.S.E                   | University of Colorado Denver                             |
| Selective disruption of hippocampal dentate granule cells in autism: Impact of PT   | \$396,897   | Q2.S.E                   | Cincinnati Children's Hospital Medical Center             |
| Self-Regulation and Sleep in Children At Risk for Autism Spectrum Disorders   | \$249,000   | Q2.S.E                   | Purdue University   |
| Semaphorin4D and PlexinB1 mediate GABAergic synapse development in mammalian CNS  | \$27,814    | Q2.Other                 | Brandeis University                                       |
| Sensitive periods in cerebellar development   | \$32,941    | Q2.S.A                   | University of Maryland, Baltimore                         |
| Sensory processing and integration in autism  | \$524,517   | Q2.Other                 | Albert Einstein College of Medicine of Yeshiva University |
| Sex differences in the neural mechanisms of treatment response  | \$5,000     | Q2.S.B                   | Yale University   |
| Sex-Specific Gene-Environment Interactions Underlying ASD   | \$35,000    | Q2.S.B                   | Rockefeller University                                    |
| Shank3 in synaptic function and autism  | \$385,200   | Q2.Other                 | Massachusetts Institute of Technology                     |
| SHB: Type II (INT): Synthesizing self-model and mirror feedback imageries with applications to behavior modeling for children with autism | \$0         | Q2.Other                 | University of Kentucky Research Foundation                |
| Simons Variation in Individuals Project (Simons VIP)  | \$372,288   | Q2.S.G                   | Emory University  |
| Simons Variation in Individuals Project (Simons VIP) Functional Imaging Site and Structural Imaging/Phenotyping Site                      | \$0         | Q2.S.G                   | Children's Hospital of Philadelphia                       |
| Simons Variation in Individuals Project (VIP) Core Neuroimaging Support Site  | \$434,182   | Q2.S.G                   | University of California, San Francisco                   |
| Simons Variation in Individuals Project (VIP) Functional Imaging Site   | \$1,142,798 | Q2.S.G                   | University of California, San Francisco                   |
| Simons Variation in Individuals Project (VIP) Functional Imaging Site   | \$419,819   | Q2.S.G                   | The Children's Hospital of Philadelphia                   |
| Simons Variation in Individuals Project (VIP) Imaging Analysis Site   | \$159,805   | Q2.S.G                   | Harvard University  |

| Project Title  | Funding   | Strategic Plan Objective | Institution                                 |
|--|-----------|--------------------------|---|
| Simons Variation in Individuals Project (VIP) Principal Investigator   | \$123,623 | Q2.S.G                   | Columbia University                         |
| Simons Variation in Individuals Project (VIP) Recruitment Coordination Site  | \$216,139 | Q2.S.G                   | Weis Center for Research - Geisinger Clinic |
| Simons Variation in Individuals Project (VIP) Recruitment Core and Phase 2 Coordination Site                             | \$168,626 | Q2.S.G                   | Geisinger Clinic, Weis Center for Research  |
| Simons Variation in Individuals Project (VIP) Site   | \$508,680 | Q2.S.G                   | University of Washington                    |
| Simons Variation in Individuals Project (VIP) Site   | \$624,864 | Q2.S.G                   | Boston Children's Hospital                  |
| Simons Variation in Individuals Project (VIP) Site   | \$316,306 | Q2.S.G                   | Baylor College of Medicine                  |
| Simons Variation in Individuals Project (VIP) Statistical Core Site  | \$221,381 | Q2.S.G                   | Columbia University                         |
| Simons Variation in Individuals Project (VIP) Structural Imaging and Phenotyping Site - SCAP-local                       | \$260,788 | Q2.S.G                   | The Children's Hospital of Philadelphia     |
| Single-unit recordings in neurosurgical patients with autism   | \$56,900  | Q2.S.E                   | California Institute of Technology          |
| Social brain circuits and fever-evoked response in 16p11.2 mice  | \$87,500  | Q2.Other                 | Cold Spring Harbor Laboratory               |
| Social brain networks for the detection of agents and intentions   | \$399,300 | Q2.Other                 | Yale University                             |
| Social interaction and reward in autism: Possible role for ventral tegmental area  | \$124,936 | Q2.Other                 | University of Geneva                        |
| Social processing, language, and executive functioning in twin pairs: Electrophysiological and behavioral endophenotypes | \$0       | Q2.S.G                   | University of Washington                    |
| Social reward in autism: Electrophysiological, behavioral, and clinical correlates                                       | \$51,400  | Q2.Other                 | Seattle Childrens Hospital                  |
| Spatial attention in autism spectrum disorders   | \$0       | Q2.Other                 | New York University                         |
| Speech disorders in individuals with 16p11.2 deletion or duplication   | \$40,000  | Q2.S.G                   | University of Wisconsin                     |
| Statistical analysis of biomedical imaging data in curved space  | \$313,376 | Q2.Other                 | University of North Carolina at Chapel Hill |
| Statistical methodology and analysis of the Simons Simplex Collection and related data                                   | \$80,389  | Q2.S.G                   | University of Pennsylvania                  |
| Statistical word learning in children with language disorders  | \$29,355  | Q2.Other                 | University of Wisconsin - Madison           |
| Stimulus preceding negativity and social stimuli in autism spectrum disorder   | \$28,580  | Q2.Other                 | University of California, San Diego         |
| Structural and functional connectivity of large-scale brain networks in autism   | \$168,978 | Q2.Other                 | Stanford University                         |
| Structural and functional neuroimaging of the auditory system in autism  | \$157,938 | Q2.Other                 | Children's Hospital of Philadelphia         |

| Project Title   | Funding   | Strategic Plan Objective | Institution                                  |
|---|-----------|--------------------------|--|
| Studying Rett and Fragile X syndrome in human ES cells using TALEN technology                                     | \$30,000  | Q2.S.D                   | Whitehead Institute for Biomedical Research  |
| Study of health outcomes in children with autism and their families   | \$496,440 | Q2.Other                 | Lewin Group, Inc.                            |
| Subependymal zone function in autism spectrum disorders   | \$0       | Q2.Other                 | University of Oxford                         |
| Synaptic phenotype, development, and plasticity in the fragile X mouse  | \$379,329 | Q2.S.D                   | University of Illinois at Urbana Champaign   |
| Synchronous activity in networks of electrically coupled cortical interneurons                                    | \$0       | Q2.Other                 | University of California, Davis              |
| Taste, smell, and feeding behavior in autism: A quantitative traits study   | \$541,983 | Q2.Other                 | University of Rochester                      |
| Testing the hyperspecificity hypothesis: A neural theory of autism  | \$189,836 | Q2.Other                 | Children's Hospital of Philadelphia          |
| Testing the ribosomal protein S6 as treatment target and biomarker in autism spectrum disorders                   | \$60,000  | Q2.S.D                   | Cincinnati Childrens Hospital Medical Center |
| Thalamocortical connectivity in children and adolescents with ASD-A combined fMRI and DTI approach                | \$28,600  | Q2.Other                 | San Diego State University                   |
| The Brain Genomics Superstruct Project  | \$150,000 | Q2.L.B                   | Harvard University                           |
| The cognitive neuroscience of autism spectrum disorders   | \$997,922 | Q2.Other                 | National Institutes of Health                |
| The computational basis of theory of mind in the human brain  | \$130,695 | Q2.Other                 | California Institute of Technology           |
| The effects of autism on the sign language development of deaf children   | \$53,942  | Q2.Other                 | Boston University                            |
| The effects of disturbed sleep on sleep-dependent memory consolidation and daily function in individuals with ASD | \$0       | Q2.S.E                   | Beth Israel Deaconess Medical Center         |
| The flexibility of individuation and ensemble representation  | \$47,114  | Q2.Other                 | Northwestern University                      |
| The genomic bridge project (GBP)  | \$158,206 | Q2.S.G                   | Massachusetts General Hospital               |
| The impact of Pten signaling on neuronal form and function  | \$375,706 | Q2.Other                 | Dartmouth College                            |
| The mechanism of the maternal infection risk factor for autism  | \$150,000 | Q2.S.A                   | California Institute of Technology           |
| The microRNA pathway in translational regulation of neuronal development  | \$340,304 | Q2.S.D                   | University of Massachusetts Medical School   |
| The microstructural basis of abnormal connectivity in autism  | \$276,865 | Q2.Other                 | University of Utah                           |
| The neural bases of top-down attentional control in autism spectrum disorders                                     | \$27,578  | Q2.Other                 | City College of New York                     |
|   |           |                          |  |

| Project Title   | Funding   | Strategic Plan Objective | Institution   |
|---|-----------|--------------------------|---|
| The neural basis of weak central coherence in autism spectrum disorders   | \$26,080  | Q2.Other                 | Yale University   |
| The neural substrates of higher-level learning in autism  | \$221,760 | Q2.Other                 | University of California, Davis   |
| The neurophysiology of sensory processing and multisensory integration in ASD   | \$437,684 | Q2.Other                 | Syracuse University   |
| The PI3K Catalytic Subunit p110delta as Biomarker and Therapeutic Target in Autism and Schizophrenia  | \$0       | Q2.Other                 | Cincinnati Children's Hospital Medical Center<br>University of Cincinnati |
| The role of brainstem NTS inflammation and oxidative stress in Autism   | \$43,000  | Q2.S.A                   | Wadsworth Center  |
| The role of Fox-1 in neurodevelopment and autistic spectrum disorder  | \$145,757 | Q2.S.D                   | University of California, Los Angeles                                     |
| The role of genetics in communication deficits in autism spectrum disorders   | \$0       | Q2.S.D                   | University of Pennsylvania  |
| The role of MeCP2 in Rett syndrome  | \$344,213 | Q2.S.D                   | University of California, Davis   |
| The role of mTOR inhibitors in the treatment of autistic symptoms in symptomatic infantile spasms   | \$0       | Q2.S.E                   | Albert Einstein College of Medicine of Yeshiva University                 |
| The Role of Shank3 in Neocortex Versus Striatum and the Pathophysiology of Autism   | \$25,000  | Q2.S.G                   | Duke University   |
| The role of the GRIP protein complex in AMPA receptor trafficking and autism spectrum disorders   | \$15,000  | Q2.Other                 | Johns Hopkins University  |
| The role of the new mTOR complex, mTORC2, in autism spectrum disorders  | \$0       | Q2.Other                 | Baylor College of Medicine  |
| The role of UBE3A in autism   | \$250,001 | Q2.S.D                   | Harvard Medical School  |
| The role of UBE3A in autism: Is there a critical window for social development?   | \$54,450  | Q2.S.D                   | Erasmus University Medical Center   |
| The social brain in schizophrenia and autism spectrum disorders   | \$498,431 | Q2.Other                 | Hartford Hospital   |
| The striatal circuitry underlying autistic-like behaviors   | \$31,975  | Q2.Other                 | Duke University   |
| Time Perception and Timed Performance in Autism   | \$248,938 | Q2.Other                 | Michigan State University   |
| TMLHE deficiency and a carnitine hypothesis for autism  | \$60,000  | Q2.S.D                   | Baylor College of Medicine  |
| To Determine Epidermal growth factor (EGF) and EGF Receptor Plasma Concentration and It's Relationship to Hepatocyte Growth Factor (HGF), GABA Levels and Symptom Severity in Autistic Children | \$4,500   | Q2.S.A                   | Hartwick College  |
| To study the relationship between low GAD2 levels and anti-GAD antibodies in autistic children  | \$0       | Q2.S.A                   | Hartwick College  |
| Transcriptional control of inhibitory synapse formation   | \$353,295 | Q2.Other                 | Dana-Farber Cancer Institute  |
| Transcriptional responsiveness in lymphoblastoid cell lines   | \$0       | Q2.Other                 | University of Pennsylvania  |
| Translation, synchrony, and cognition   | \$375,588 | Q2.S.D                   | New York University   |

| Project Title   | Funding   | Strategic Plan Objective | Institution                             |
|---|-----------|--------------------------|---|
| Translational dysregulation in autism pathogenesis and therapy  | \$125,000 | Q2.S.D                   | Massachusetts General Hospital          |
| Translational regulation of adult neural stem cells   | \$359,977 | Q2.S.D                   | University of Wisconsin - Madison       |
| Treatment of medical conditions among individuals with autism spectrum disorders  | \$488,568 | Q2.S.E                   | National Institutes of Health           |
| TrkB agonist therapy for sensorimotor dysfunction in Rett syndrome  | \$141,976 | Q2.S.D                   | Case Western Reserve University         |
| Typical and pathological cellular development of the human amygdala   | \$369,600 | Q2.Other                 | University of California, Davis         |
| Understanding the basic neurobiology of Pitt-Hopkins syndrome   | \$0       | Q2.S.D                   | The University of Alabama at Birmingham |
| Understanding the brain basis of impaired imitation learning in autism  | \$56,900  | Q2.Other                 | Kennedy Krieger Institute               |
| Understanding the etiological significance of attentional disengagement in infants at-risk for ASD  | \$49,000  | Q2.L.A                   | Boston Children's Hospital              |
| Understanding the Genetic Architecture of Rett Syndrome - an Autism Spectrum Disorder   | \$0       | Q2.S.D                   | Cold Spring Harbor Laboratory           |
| Unreliability of neuronal responses in mouse models of autism   | \$62,500  | Q2.Other                 | Carnegie Mellon University              |
| Urokinase-type plasminogen activator plasma concentration and its relationship to hepatocyte growth factor (HGF) and GABA levels in autistic children | \$0       | Q2.Other                 | Hartwick College                        |
| Using Drosophila to characterize the molecular pathogenesis of autism   | \$234,000 | Q2.Other                 | Massachusetts Institute of Technology   |
| Using fMRI to understand the Neural Mechanisms of Pivotal Response Treatment  | \$29,500  | Q2.L.B                   | University of California, Santa Barbara |
| Using fruit flies to map the network of autism-associated genes   | \$124,996 | Q2.Other                 | University of California, San Diego     |
| Using high definition fiber tracking to define developmental neurobiologic mechanisms & a neural basis for behavioral heterogeneity                   | \$0       | Q2.Other                 | Carnegie Mellon University              |
| Using near-infrared spectroscopy to measure the neural correlates of social and emotional development in infants at risk for autism spectrum disorder | \$14,950  | Q2.Other                 | University of New South Wales           |
| Vasopressin receptor polymorphism and social cognition  | \$310,085 | Q2.Other                 | Georgia State University                |
| Verbal/non-verbal asynchrony in adolescents with high-functioning autism  | \$402,978 | Q2.Other                 | Emerson College                         |
| VIP Family Meetings   | \$121,016 | Q2.S.G                   | VIP Family Meetings                     |
| White matter glial pathology in autism  | \$0       | Q2.Other                 | East Tennessee State University         |
| Why are autistic females rare and severe? An approach to autism gene identification.  | \$28,600  | Q2.S.B                   | Johns Hopkins University                |
|   |           |                          |   |

| Project Title   | Funding   | Strategic Plan Objective | Institution        |
|---|-----------|--------------------------|--------------------|
| Wnt modulation as a treatment for autism spectrum disorders | \$184,568 | Q2.Other                 | University of Iowa |

